

2011-2012 Weekly Field Reports

Copacabana, King George Island

Volume 10
December 19, 2011

Science Report:

1. **Penguins:** The first Adélie penguin chicks crèched this week in our study sites. A crèche is when chicks are left unattended by their parents and seek safety in numbers while the adults are away. In our productivity study, a nest is considered to be successful once the chicks have crèched, so we end our daily checks. The adults continue to return to the colony to feed their chicks, but the chicks are no longer tied to their nests, making it difficult to follow their fates.

We conducted our first chick-rearing Adélie penguin diet sample on Monday (12/19). The krill (*Euphausia superba*) consisted of unusually large proportions of juvenile krill: two of the five samples were 90% juveniles and one was 42% juveniles. The adult krill sizes ranged from 36-53 mm. The large numbers of juvenile krill indicate that there was high over-winter survival of the larval krill from last year's spawning season, most likely due to a greater than normal winter pack ice extent. Winter pack ice is essential to the survival of the larval krill, both as a place to hide from predators (pockets & cavities on the underside of the ice) and as a source of food (diatoms (phytoplankton) on the underside of the ice).

The first 21-day weights began for Adélie penguin chicks on Tuesday (12/20) and gentoo penguin chicks on Wednesday (12/21).

This week we put out radio transmitters on 20 breeding gentoo penguins with chicks and 19 Adélie penguins with chicks. These are used to track the length of the penguins' foraging trips throughout the chick-rearing period by recording their presence & absence via the radio signals received from the transmitters. The radio signals are unable to transmit through salt water, so no signals are received when the penguins are at sea; when the birds come ashore, their signals are once again received, resulting in a "presence/absence" record of their daily activities.

On Monday (12/19), 12 more GLS tags were attached to breeding Adélie penguins in one of our study sites.

The first chinstrap penguin chicks were observed this week. About 75% of the nests in our study colonies had hatched as of Thursday (12/22).

2. **Skuas:** On Friday (12/23), the first brown skua chick of the season hatched at Copa and on Saturday (12/24) our first south polar skua chick of the season hatched in the Backcountry. Currently 26% of our 161 active skua territories have nests with eggs or chicks.



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3. **Seals & Whales:** On Thursday (12/22), the census from Copa to Patelnia resulted in 599 elephant seals (5 males, 62 females, 7 weaners, 543 juveniles/unknowns), one Weddell seal, and one fur seal. Our Copa to Pt. Thomas census found 18 elephant seals (juveniles/unknowns).

The humpback whale activity decreased a bit this week; however, on Wednesday (12/21) three humpback whales were observed breaching across the bay.

Weekly Weather

Weather improved considerably this week, with calm winds and light rain every day (Monday - Sunday). On Friday (12/23), we received an afternoon break in the rain with clear skies and warm temperatures.

Other News:

We hosted an international Solstice celebration at Copa, with four Poles from Arctowski & nine Brazilians from Ferraz Station in attendance.

Christmas Eve was spent with our friends at Arctowski, returning to Copa on Christmas day for our own quiet celebration with just the three of us.

The 2011-12 Copa Field Team
Penny Chilton, Field Team Leader
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